

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
12 August 2004 (12.08.2004)

PCT

(10) International Publication Number  
**WO 2004/068623 A1**

(51) International Patent Classification<sup>7</sup>: H01M 8/06, 8/04

(21) International Application Number:

PCT/JP2004/000341

(22) International Filing Date: 16 January 2004 (16.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

2003-022408

30 January 2003 (30.01.2003) JP

(71) Applicant (for all designated States except US): NISSAN MOTOR CO., LTD. [JP/JP]; 2, Takara-cho, Kanagawa-ku, Yokohama-shi, Kanagawa, 2210023 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KUSHIBIKI, Keiko [JP/JP]. NAKAJIMA, Yasushi [JP/JP]. HARA, Naoki [JP/JP].

(74) Agents: MIYOSHI, Hidekazu et al.; 9th Floor, Toranomon Daiichi Building, 2-3, Toranomon 1-chome, Minato-ku, Tokyo, 1050001 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

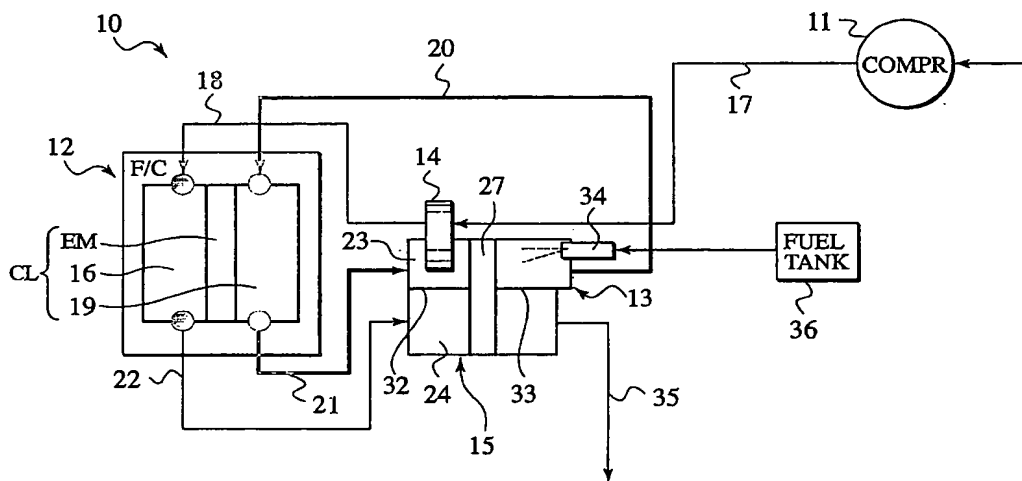
**Published:**

— with international search report

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FUEL CELL SYSTEM AND RELATED METHOD



(57) Abstract: A fuel cell system is provided with a fuel cell (12) having a fuel electrode (19) supplied with fuel gas and an air electrode (16) supplied with oxidizer gas, a carbon dioxide separator (15, 52, 71) separating carbon dioxide from anode exhaust gas (25) expelled from the fuel electrode of the fuel cell, and a fuel vaporizer (13, 58) producing fuel gas by injecting fuel into anode exhaust gas, whose carbon dioxide is separated in the carbon dioxide separator and which is expelled from the carbon dioxide separator. Fuel gas produced in the fuel vaporizer is supplied to the fuel electrode of the fuel cell.

WO 2004/068623 A1